Table of flood stages during January–February 1937—Continued

River and station	Flood stage	Above flood stages—dates From—	To—	Crest Stage	Date
MISSISSIPPI SYSTEM—continued					
Arkansas Basin					
	Feet			*Feet*	
Poteau: Poteau, Okla	21	Jan. 9	Jan. 13	26.6	Jan. 10.
		Jan. 13	Jan. 18	27.6	Jan. 16.
		Jan. 26	Jan. 27	21.4	Jan. 26.
Petit Jean: Danville, Ark	20	Jan. 10	Jan. 19	23.6	Jan. 16.
		Jan. 22	Jan. 29	24.3	Jan. 23.
Arkansas: Van Buren, Ark	22	Jan. 17	Jan. 17	22.0	Jan. 17.
Red Basin					
Ouachita:					
		Jan. 10	Jan. 12	21.9	Jan. 11.
Arkadelphia, Ark	17	Jan. 15	Jan. 16	17.6	Jan. 15.
		Jan. 20	Jan. 26	26.0	Jan. 23.
Camden, Ark	26	Jan. 11	Feb. 4	41.5	Jan. 25.
Monroe, La	40	Jan. 31	Mar. 7	44.7	Feb. 9, 10.
Black: Jonesville, La	50	Feb. 9	(13)	55.8	Mar. 4–7
Little: Whitecliffs, Ark	25	Jan. 13	Jan. 18	25.4	Jan. 13, 14.
		Jan. 24	Jan. 27	26.4	Jan. 25.
Sulphur:					
		Jan. 8	Jan. 18	23.0	Jan. 15.
Ringo Crossing, Tex	20	Jan. 22	Jan. 22	20.1	Jan. 22.
		Jan. 24	Jan. 28	23.5	Jan. 25.
		Jan. 2	Jan. 6	22.8	Jan. 4, 5.
Naples, Tex	22	Jan. 13	Feb. 4	25.5	Jan. 21, 22.
Cypress: Jefferson, Tex	18	Jan. 26	Jan. 30	19.4	Jan. 28.
Red: Alexandria, La	32	Jan. 27	Feb. 5	33.0	Feb. 2.
Lower Mississippi Basin					
Big Lake Outlet: Manila, Ark	10	Jan. 9	Mar. 6	21.4	Jan. 27, 28.
St. Francis:					
		Jan. 1	Jan. 5	23.4	Jan. 2.
		Jan. 8	Jan. 28	26.2	Jan. 15.
Fisk, Mo	20	Jan. 31	Feb. 5	23.3	Feb. 3.
		Feb. 10	Feb. 12	21.9	Feb. 11.
St. Francis, Ark	18	Jan. 5	Feb. 20	26.7	Jan. 19.
St. Francis Lake Lock, Ark	30	Jan. 24	Feb. 2	31.1	Jan. 27, 28.
Marked Tree, Ark	17	Jan. 26	Feb. 18	18.8	Feb. 5–9.
Parkin, Ark	28	Jan. 22	Mar. 4	34.3	Feb. 4–6.
Madison, Ark	32	...do...	Mar. 7	40.7	Feb. 13.
Tallahatchie: Swan Lake, Miss	26	Jan. 7	Mar. 13	33.9	Feb. 2.
Yazoo:					
Greenwood, Miss	35	Feb. 2	Feb. 16	36.4	Feb. 9.
Yazoo City, Miss	29	Jan. 29	(13)	37.1	Feb. 24.
Mississippi:					
New Madrid, Mo	34	Jan. 13	Feb. 26	47.9	Feb. 2–5.
Memphis, Tenn	34	Jan. 20	Mar. 1	48.7	Feb. 10.
Helena, Ark	44	Jan. 22	Mar. 6	60.3	Feb. 11.

Table of flood stages during January–February 1937—Continued

River and station	Flood stage	Above flood stages—dates From—	To—	Crest Stage	Date
MISSISSIPPI SYSTEM—continued					
Lower Mississippi Basin—Continued					
Mississippi—Continued.	*Feet*			*Feet*	
Arkansas City, Ark	42	Jan. 27	Mar. 8	53.8	Feb. 12–15.
Greenville, Miss	36	Jan. 24	...do...	52.2	Feb. 15.
Vicksburg, Miss	43	Jan. 29	Mar. 15	53.2	Feb. 21.
Natchez, Miss	46	Jan. 30	Mar. 18	58.0	Feb. 21–25
Angola, La	45	Feb. 1	Mar. 22	55.5	Feb. 27, 28.
Baton Rouge, La	35	Feb. 2	Mar. 23	45.0	Feb. 28.
Donaldsonville, La	28	Feb. 3	Mar. 22	34.5	Feb. 27.
Reserve, La	22	Feb. 5	Mar. 20	25.6	Feb. 26.
New Orleans, La	17	Feb. 7	Mar. 19	19.3	Feb. 28.
Atchafalaya Basin					
Atchafalaya:					
Simmesport, La	41	Feb. 6	Mar. 22	49.3	Mar. 1–4.
Melville, La	37	Feb. 3	Mar. 24	44.8	Mar. 2, 3.
Atchafalaya, La	22	Jan. 22	(13)	25.9	Mar. 7–9.
GULF OF CALIFORNIA DRAINAGE					
Colorado Basin					
Gila: Kelvin, Ariz	5	Feb. 7	Feb. 8	6.2	Feb. 8.
PACIFIC SLOPE DRAINAGE					
San Joaquin Basin					
		Feb. 6	Feb. 7	13.9	Feb. 6.
Kings: Piedra, Calif	10	Feb. 13	Feb. 14	13.7	Feb. 14.
Mokelumne: Bensons Ferry, Calif	12	Feb. 7	Feb. 8	12.7	Feb. 7.

[1] Continued into March.
[2] Fell slightly below flood stage on Feb. 9.
[3] Fell slightly below flood stage on Feb. 20.
[4] Fell slightly below flood stage on Jan. 24.
[5] Gage could not be read on Jan. 16 due to high water.
[6] Estimated.
[7] Water over gage.
[8] Fell slightly below flood stage on Jan. 17 and 24.
[9] Fell slightly below flood stage on Jan. 17.
[10] Readings furnished by U. S. Engineer Office.
[11] Readings from U. S. Geological Survey recording gage.
[12] Fell slightly below flood stage on Feb. 21.
[13] Continued on Mar. 31.

WEATHER ON THE ATLANTIC AND PACIFIC OCEANS

[The Marine Division, I. R. TANNEHILL, in charge]

NORTH ATLANTIC OCEAN, FEBRUARY 1937

By H. C. HUNTER

Atmospheric pressure.—Pressure averaged lower than normal over nearly all the North Atlantic area. The greatest deficiency noted, about one-third of an inch, was found around and to the northeastward of the British Isles.

The deficiency was less, but considerable, toward the northwest, to Iceland, also toward the southwest, to the Azores. Slight excesses were indicated over the Gibraltar-Madeira section and from Newfoundland and southeastern Labrador northeastward to southern Greenland. On the American side the deficiency was moderately large, greater than a tenth of an inch, from the coasts of the Middle Atlantic States and southern New England to the vicinity of Bermuda.

In general, the North Atlantic HIGH was displaced to the southeastward of its normal position in February and remained so until quite near the end of the month.

The range of pressure was less than is usual during winter. For the highest marks there are several readings between 30.50 and 30.60 inches, chiefly from waters slightly to eastward of Hatteras, on the 11th or 12th, and from the vicinity of Portugal about the 18th. The lowest reading so far reported by a vessel is 28.45 inches, made during the forenoon of the 2d, near latitude 46° N., longitude 31° W., on the American steamship *Meanticut*. Table 1 indicates even lower pressure at Reykjavik, Iceland, on the 13th.

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, February 1937*

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Julianehaab, Greenland	29.54	+0.01	30.30	21	28.80	13
Reykjavik, Iceland	29.38	−.16	30.27	27, 28	28.32	13
Lerwick, Shetland Islands	29.38	−.34	29.80	12, 25	28.70	5
Valencia, Ireland	29.57	−.33	30.12	20	28.97	25, 26
Lisbon, Portugal	30.19	+.09	30.42	17	29.86	8
Madeira	30.13	+.06	30.39	20	29.94	3
Horta, Azores	30.00	−.15	30.40	28	29.32	6
Belle Isle, Newfoundland	29.82	+.11	30.34	22	28.96	15
Halifax, Nova Scotia	29.87	−.04	30.32	21	29.00	15
Nantucket	29.91	−.13	30.36	20	29.16	14
Hatteras	30.03	−.08	30.54	12	29.31	16
Bermuda	30.01	−.11	30.42	13	29.26	6
Turks Island	30.03	−.05	30.11	4, 7	29.96	17
Key West	30.03	−.04	30.18	3	29.89	16
New Orleans	30.10	+.01	30.57	11	29.73	8

NOTE.—All data based on a. m. observations only, with departures compiled from best available normals related to time of observation, except Hatteras, Key West, Nantucket, and New Orleans, which are 24-hour corrected means.

Cyclones and gales.—The northwestern area, north of 40° and west of midocean, appears to have been somewhat less stormy than during an average February. Other portions

of the North Atlantic experienced greater than usual storminess. During the final 9 days there was distinctly less turbulence than there had been previously.

As the month began a LOW of marked energy was central about 500 miles southeast of Newfoundland and pressure was mainly low to eastward as far as the British Isles. The principal center advanced northeastward and another storm of considerable strength developed on the 2d and 3d after moving from the North American Continent to near the earlier position of the first LOW. Another rapid development took place to southwestward of the second LOW and on the evening of the 4th was centered as a distinct cyclone off the coast near Wilmington, N. C., from where it traveled first toward the east-northeast; than for some distance it closely followed the thirty-sixth parallel eastward, attaining great strength by the evening of the 5th, but afterward losing force. Late on the 5th the American steamship *Boringuen*, near 36° N., 72° W., experienced winds of force 12, the earlier of two reports of such strength during the month.

The intense winds circulating around this LOW were felt notably from the Florida coast to the vicinity of Long Island, especially on the 4th, 5th, and 6th. Three barges from the tows of two tugs were sunk between the entrances of Chesapeake and Delaware Bays and a schooner was sunk not far from Savannah, Ga. Many large vessels suffered considerable injury from this storm, and on one of these, the Danish motorship *Chr. Sass*, bound northward off Cape Hatteras, a seaman was killed—apparently the only loss of life at sea that resulted from this storm.

Charts IX and X present the situations on the 5th and 6th, respectively.

On the 14th and 15th another important LOW was passing over New England and the Maritime Provinces and by the morning of the 16th was centered a short distance to northeastward of Belle Isle. Meantime a southwestern secondary LOW had developed, showing considerable strength near the Virginia Capes on the morning of the 16th. The northeastern center moved quickly toward western Iceland, which it reached on the forenoon of the 18th. As pressure over and to westward of southwestern Europe was quite high at this time, strong westerly winds prevailed over the eastern half of the chief steamship routes to the English Channel and to the north of Ireland. During the night of the 17th to 18th, the American steamship *Minnequa*, from Copenhagen for New York, when near 57° N., 23° W., encountered a force-12 wind.

Meantime the southwestern center traveled less rapidly toward the east-northeast, and by the 18th, when a moderate distance to southeastward of Newfoundland, had lost considerable strength. As a result of the high winds around this southwestern LOW, one abandoned barge was probably sunk, while many fishing schooners, particularly in the region from Cape Cod to Newfoundland, met exceedingly severe weather, two sailors from one schooner being drowned. The conditions on the 17th appear in Chart XI.

Fog.—There was less fog than during January just preceding over nearly all squares of the western third of the North Atlantic, also in most parts of the Gulf of Mexico where fog is likely to be encountered. In the 5°-square, 35° to 40° N., 75° to 80° W. fog was reported on 9 days, a greater number than in any other 5° area of the North Atlantic; here, as indeed nearly everywhere from waters near Florida to the vicinity of Newfoundland, there was less fog during the second half of February than during the first half.

To the eastward of the fortieth meridian there was generally more fog than during January just preceding. The period from 10th to 15th, inclusive, was especially notable for fog over the northeastern part of the North Atlantic Ocean.

Comparison with the average amount of fog during February shows that most North Atlantic areas had less fog than the average. However, from the Carolina coast to Cape Cod there was somewhat more than average, in spite of the decrease from the preceding month; and there was more than average likewise from the Bay of Biscay southwestward and southward nearly to the Azores and Madeira.

Two widely separated sections in low latitudes reported fog or conditions similar to fog. Close to the Tropic of Cancer near 35° longitude, fog was noted on the 3d and 4th, while near Vera Cruz it was met on the 24th.

Ice.—Ice densely packed interfered greatly with navigation near St. Johns, Newfoundland, and close to Sydney, Cape Breton Island. To the eastward of Newfoundland ice appeared near the chief steamship lanes earlier than usual, and on the 9th advices were issued for liners to shift to a more southerly route than that usually taken during February.